IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Box-Sea

APPLICANTS:	Hardin et al.	§	ART UNIT NO.: 1645
SERIAL NO.:	**10/007,621**	§	EXAMINER: UNKNOWN
FILED:	12/03/01	§	DOCKET NO.:00007/02UTL
		§	

TITLE: Enzymatic Nucleic Acid Synthesis:
Compositions and Methods for Altering
Monomer Incorporation Fidelity

§
§
§
§

EV 192 402 080 US	CERTIFICATE OF MAIL BY EXPRESS MAIL	28 January 2003
Express Mail Number		Date of Deposit
I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. § 1.10 on the date indicated above and is addressed to the: Assistant Commissioner of Patent		
Robert W. Strozier	BOX SEQUENCE Washington, D.C. 20231	28 January 2003 Date of Signature

RESPONSE TO THE NOTICE TO COMPLY WITH SEQUENCE RULES

Dear Sir:

The Applicant hereby responds to the **Notice to Comply with Sequence Rules** of **23 December 2002** and submits the following documents:

(1) **Copy of Notice to Comply with Sequence Rules;**
(2) **A Substitute Paper "Sequence Listing" and an identical "Sequence Listing" in computer readable, generated by the PatentIn 3.1 Software and check by Check 3.0; and a statement of identity of sequences.**
(4) **Post Card.**

Respectfully submitted,

Date: **28 January 2003**

Robert W. Strozier, Reg. No. 34,024
Attorney for Applicants

Page 1

Response to 12-23-02 Notice to Comply with Sequence Rules
Express Mail Label No.: EV 192 402 080 US
W:\Client Files\TUVW\VISIGEN\VisiGen02\UTL\Res to 11-22-02 Notice to Comply with Sequence Rules.wpd

ROBERT W. STROZIER, P.L.L.C.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: Hardin et al.	§ ART UNIT NO.: 1645
SERIAL NO.: **10/007,621**	§ EXAMINER: UNKNOWN
FILED: 12/03/01	§ DOCKET NO.:00007/02UTL

RECEIVED

FEB 0 6 2003

TECH CENTER 1600/2900

TITLE: Enzymatic Nucleic Acid Synthesis: Compositions and Methods for Altering Monomer Incorporation Fidelity

STATEMENT REGARDING SUBSTITUTE PAPER COPY OF SEQUENCE LISTING AND CRF COPY OF SEQUENCE LISTING

Dear Sir/Madam:

In response to a Notice to Comply with Sequence Rules, Applicant used the PatentIn 3.1 software for the United States Patent and Trademark Office to generate a hard copy and electronic copy of the sequence listing as required by the Notice.

Applicants' Attorney verifies that the paper and electronic listing are identical, both generated by PatentIn 3.1. Applicant has used the definitions of the sequences as set forth on Page 14 paragraph 66 (atgcctg) and Page 59 Table 1 for the remaining sequences.

Applicants' Attorney has attempted in good faith to respond to this notice; however, Applicants' Attorney must point out that at numerous parts of the specification, reference is made to specific enzymes and DNA molecules, without the actual sequences being included. Applicants did not include actual sequences because the actual sequences are not germane to this application. The application relates to functionalized dNTPs or other small molecules that increase base incorporation fidelity. The invention is not related to any specific nucleic

Statement Regarding Substitute Paper Copy of Sequence Listing and crf Copy of Sequence Listing
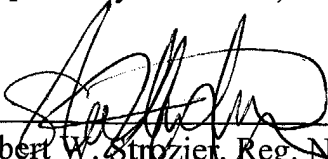**Express Mail Label No.: EV 192 402 080 US**
W:\Client Files\TUVW\VISIGEN\VisiGen02\UTL\Res to 11-22-02 Notice to Comply with Sequence Rules.wpd

ROBERT W. STROZIER, P.L.L.C.

acid sequence or peptide sequence.

Respectfully submitted,

Date: **28 January 2003**

Robert W. Strozier, Reg. No. 34,024
Attorney for Applicants

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TECH CENTER 1600/2900

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
Washington, DC 20231
www.uspto.gov

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
10/007,621	12/03/2001	Susan H. Hardin	00007/02UTL

CONFIRMATION NO. 9970

23873
ROBERT W STROZIER, PLLC
2925 BRIARPARK, SUITE 930
HOUSTON, TX 77042

FORMALITIES LETTER

OC000000009149869

Date Mailed: 12/23/2002

NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

Filing Date Granted

Applicant is given **TWO MONTHS FROM THE DATE OF THIS NOTICE** within which to file the items indicated below to avoid abandonment. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

- A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing." Applicant must provide a substitute computer readable form (CRF) copy of the "Sequence Listing" and a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d).

For questions regarding compliance to these requirements, please contact:

- **For Rules Interpretation, call (703) 308-4216**
- **To Purchase PatentIn Software, call (703) 306-2600**
- **For PatentIn Software Program Help, call (703) 306-4119 or e-mail at patin21help@uspto.gov or patin3help@uspto.gov**

A copy of this notice MUST be returned with the reply.

Customer Service Center
Initial Patent Examination Division (703) 308-1202

PART 1 - ATTORNEY/APPLICANT COPY

DOCKETED
BY _____ DATE _____
FOR ACTION ON FOLLOWING DAT.

UNITED STATES
PATENT AND
TRADEMARK OFFICE

Commissioner for Patents
Washington. DC 20231
www.uspto.gov

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
10/007,621	12/03/2001	Susan H. Hardin	00007/02UTL

23873
ROBERT W STROZIER, PLLC
2925 BRIARPARK, SUITE 930
HOUSTON, TX 77042

RECEIVED
FEB 0 6 2003
TECH CENTER 1600/2900

CONFIRMATION NO. 9970
FORMALITIES LETTER

OC000000009149869

Date Mailed: 12/23/2002

NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

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*A copy of this notice **MUST** be returned with the reply.*

Customer Service Center
Initial Patent Examination Division (703) 308-1202
PART 2 - COPY TO BE RETURNED WITH RESPONSE

SEQUENCE LISTING

<110> Visigen Biotechnologies, Inc.

<120> Enzymatic Nucleic Acid Synthesis: Compositions and Methods for Altering Monomer Incorporation Fidelity

<130> 00007/02PCT

<140> PCT/US01/45819
<141> 2001-12-03

<150> 60/250,764
<151> 2000-12-01

<160> 9

<170> PatentIn version 3.1

<210> 1
<211> 7
<212> DNA
<213> Artificial

<220>
<223> The sequences listed here are artifically generated DNA sequences
  synthesized to test fidelity of monomer incorporation due to sub
  stitution at the gamma phosphate of the dNTPs.

<220>
<221> Oligonucleotide
<222> (1)..(7)
<223> An example of an oligonucleotide discussed the in the definition
  section of the application.

<400> 1
atgcctg   7

<210> 2
<211> 19
<212> DNA
<213> Artificial

<220>
<223> This sequence is a primer strand for Taq DNA polymerase.

<220>
<221> primer_bind
<222> (1)..(19)
<223> Primer strand for Taq DNA polymerase

<400> 2
ggtactaagc ggccgcatg   19

<210> 3
<211> 20
<212> DNA
<213> Artificial

<220>
<223> Template Strand - antisense to the primer strand of sequence 2 wi
       th the addition of a T residue at the end of the strand designate
       d BOT-T 3'.

<220>
<221> Template
<222> (1)..(19)
<223> Anti-sense to the primer sequence 2.

<400> 3
ccatgattcg ccggcgtact   20

<210> 4
<211> 20
<212> DNA
<213> Artificial

<220>
<223> Template Strand - antisense to the primer strand of sequence 2 wi
       th the addition of a C residue at the end of the strand designate
       d BOT-C 3'.

<220>
<221> Template
<222> (1)..(19)
<223> Anti-sense to the primer sequence 2.

<400> 4
ccatgattcg ccggcgtacc   20

<210> 5
<211> 20
<212> DNA
<213> Artificial

<220>
.<223> Template Strand - antisense to the primer strand of sequence 2 wi
       th the addition of a G residue at the end of the strand designate
       d BOT-G 3'.

<220>
<221> Template
<222> (1)..(19)
<223> Anti-sense to the primer sequence 2.

<400> 5
ccatgattcg ccggcgracg   20

<210> 6
<211> 20
<212> DNA
<213> Artificial

<220>
<223> Template Strand - antisense to the primer strand of sequence 2 wi
       th the addition of a A residue at the end of the strand designate

d BOT-A 3'.

<220>
<221> Template
<222> (1)..(19)
<223> Anti-sense to the primer sequence 2.

<400> 6
ccatgattcg ccggcgtaca   20

<210> 7
<211> 23
<212> DNA
<213> Artificial

<220>
<223> Template Strand - antisense to the primer strand of sequence 2 wi
      th the addition of a TAG residues at the end of the strand design
      ated BOT-Sau 3'.

<220>
<221> Template
<222> (1)..(19)
<223> Anti-sense to the primer sequence 2.

<400> 7
ccatgattcg ccggcgtacc tag   23

<210> 8
<211> 21
<212> DNA
<213> Artificial

<220>
<223> Template Strand - antisense to the primer strand of sequence 2 wi
      th the addition of a TC residues at the end of the strand designa
      ted BOT-TC 3'.

<220>
<221> Template
<222> (1)..(19)
<223> Anti-sense to the primer sequence 2.

<400> 8
ccatgattcg ccggcgtact c   21

<210> 9
<211> 23
<212> DNA
<213> Artificial

<220>
<223> Template Strand - antisense to the primer strand of sequence 2 wi
      th the addition of a TTTC residues at the end of the strand desig
      nated BOT-3TC 3'.

<220>

<221>   Template
<222>   (1)..(19)
<223>   Anti-sense to the primer sequence 2.

<400>   9
ccatgattcg ccggcgtact ttc   23